

# ZBRN1

Harmony Hub wireless ethernet gateway,  
Harmony XB5R, Zigbee green power gateway,  
wireless to modbus TCP, 24...240V AC DC



## Main

Range of Product	Harmony
Product or Component Type	Harmony Hub Wireless/Ethernet gateway
Device short name	ZBRN1
Product Specific Application	Wireless Schneider Electric devices ecosystem
Function of module	Zigbee green power gateway
Communication port protocol	Modbus/TCP client application, with ZBRCETH module
Antenna type	Integrated
Transmission frequency	2405...2480 MHz

## Complementary

Maximum radio communication distance	328.08 Ft (100 m) in free field 820.21 Ft (250 m) if a relay antenna is located between the transmitter and Harmony Hub 196.85 Ft (60 m) if an external antenna is connected to Harmony Hub 82.02 ft (25 m) with Harmony Hub installed in a metal housing or in a closed metal enclosure
Radio response time	< 30 ms
Radio channels utilisation	<= 60 devices
[Us] Rated Supply Voltage	24...240 V AC/DC 50/60 Hz - 10...10 %
Immunity to microbreaks	10 ms
Maximum power consumption in W	4 W AC/DC
Control circuit frequency	50...60 Hz +/- 10 %
Short-circuit protection	16 A GB2 circuit breaker
Operating position	Any position
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715 Mounting plate
Electrical connection	1 conductor cable 0.00...0.01 in <sup>2</sup> (0.2...4 mm <sup>2</sup> ) - AWG 24...AWG 12 - solid - without cable end IEC 60947-1 2 conductors cable 0.00...0.00 in <sup>2</sup> (0.2...1.5 mm <sup>2</sup> ) - AWG 24...AWG 16 - solid - without cable end IEC 60947-1 1 conductor cable 0.00...0.00 in <sup>2</sup> (0.2...0.75 mm <sup>2</sup> ) - AWG 24...AWG 14 - flexible - with cable end IEC 60947-1 2 conductors cable 0.00...0.00 in <sup>2</sup> (0.2...2.5 mm <sup>2</sup> ) - AWG 24...AWG 18 - flexible - with cable end IEC 60947-1
Tightening torque	3.10...3.54 Lbf.in (0.35...0.4 N.m) EN/IEC 60947-1 3.09...3.54 lbf.in (0.35...0.40 N.m) EN/IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED Green power ON 1 LED Yellow communication network 5 LEDs Red function mode 1 LED green and yellow reception signal
Rated short-duration power frequency withstand voltage	1.5 kV 50 Hz EN/IEC 60947-5-1
[Uimp] rated impulse withstand voltage	4 kV
Surge withstand	1 KV differential mode IEC 61000-4-5 2 kV common mode IEC 61000-4-5
Width	4.80 in (122 mm)
Height	3.54 in (90 mm)

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Depth	2.36 in (60 mm)
Net Weight	0.57 lb(US) (0.26 kg)
Antenna gain	0 dBi
Integrated connection type	Ethernet Modbus TCP/IP RJ45 Modbus TCP network, 10/100 Mbit/s, 2 twisted pairs
Data storage equipment	SD card
Topology	Devices linked by daisy-chaining or tap junctions
Port Ethernet	10BASE-T/100BASE-T
Maximum cable distance between devices	3280.84 ft (1000 m)

## Environment

Radio agreement	ANATEL, type III ETSI EN 301 489-3 FCC, category 2 ETSI EN 300 440-1 ICASA RSS, category 1 ETSI EN 300 440-1 SRRC
Product Certifications	C-tick[RETURN]CCC[RETURN]CSA[RETURN]GOST[RETURN]JUL[RETURN]JCE
Directives	2004/108/EC - electromagnetic compatibility 1999/5/EC - R&TTE directive 2006/95/EC - low voltage directive
Standards	ETSI EN 300 328 EN/IEC 61131-2 CSA C22.2 No 14 ETSI EN 300 440-2 UL 508 EN/IEC 60950-1 EN 62311
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Relative humidity	90 % -13...131 °F (-25...55 °C), without condensation ETSI EN 300 440-1
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0.00...9842.52 ft (0...3000 m)
Vibration resistance	+/- 3.5 mm 5...14 Hz IEC 60068-2-6 1 gn 5...150 Hz) on panel mounting IEC 60068-2-6 2 gn 8...150 Hz) on DIN rail IEC 60068-2-6
Shock resistance	10 gn 16 ms) 6000 shocks IEC 60068-2-27
IP degree of protection	IP20 IEC 60529 casing) IP20 terminals)
Pollution degree	2 IEC 60664-1
Electromagnetic compatibility	1.2/50 µs shock waves immunity test - test level: 1 kV (differential mode) conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test - test level: 2 kV (common mode) conforming to IEC 61000-4-5 Immunity to microbreaks and voltage drops - test level: 10 ms conforming to IEC 61000-4-11
Dielectric strength	3000 V between input and output AC 4250 V between input and output DC 1500 V between input and ground AC 2150 V between input and ground DC

## Ordering and shipping details

Category	22470-XB5R WIRELESS PUSH BUTTON
Discount Schedule	I
GTIN	3606480528484
Returnability	Yes
Country of origin	ID

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.87 in (7.300 cm)
Package 1 Width	3.78 in (9.600 cm)
Package 1 Length	5.12 in (13.000 cm)

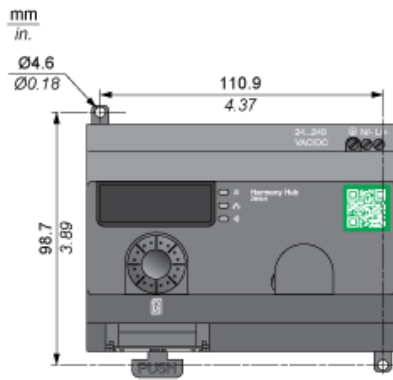
Package 1 Weight	10.93 oz (310.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	7.77 lb(US) (3.524 kg)

### Offer Sustainability

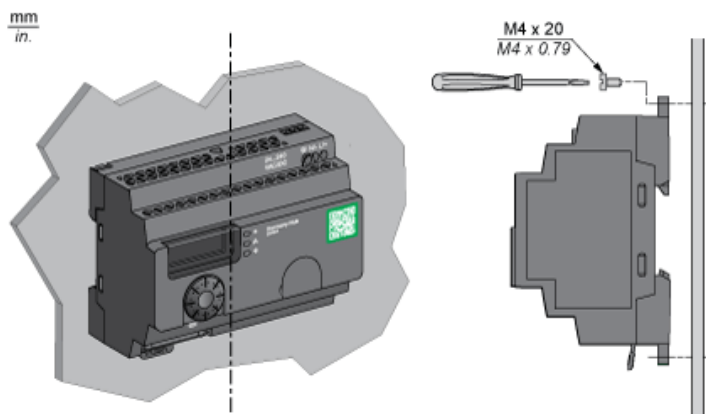
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

## Dimensions

For your information existing access point product is now named "Harmony Hub"

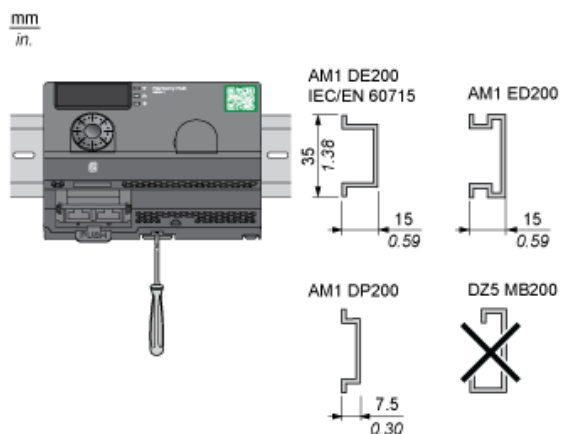


Harmony Hub on a Mounting Panel



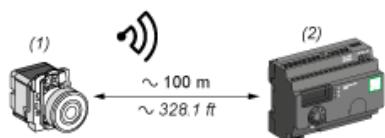
Harmony Hub is installed according to its vertical axis

Harmony Hub on DIN Rail Mounting



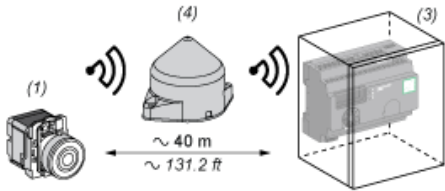
Clearances

Maximum Distance between Transmitter and Harmony Hub in Free Field Unobstructed



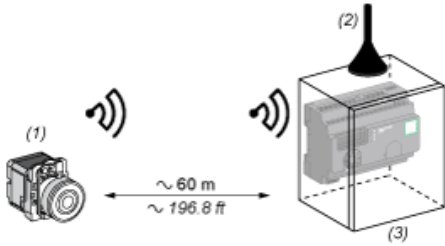
- (1) Transmitter
- (2) Harmony Hub

Maximum Distance between Transmitter and Harmony Hub in a Metal Enclosure with a Relay Antenna



- (1) Transmitter
- (3) Harmony Hub in a metal enclosure
- (4) Relay antenna

Maximum Distance between Transmitter and Harmony Hub in a Metal Enclosure with a Passive Antenna

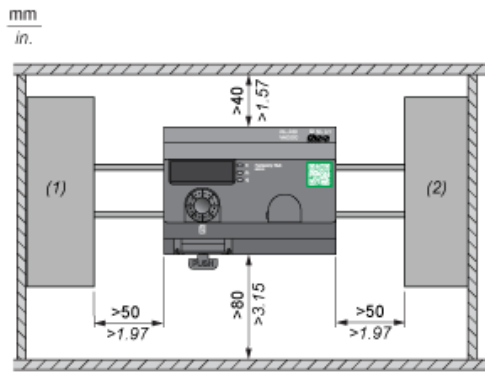


- (1) Transmitter
- (2) External antenna
- (3) Harmony Hub in a metal enclosure

The range is reduced if the transmitter is placed in a metal enclosure (reduction factor : approx 10%)

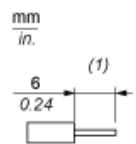
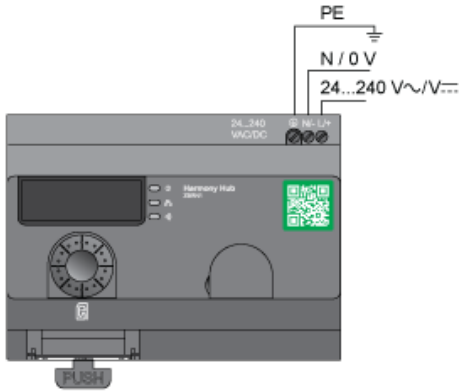
Glass window	10...20 %
Plaster wall	30...45 %
Brick wall	60 %
Concrete wall	70...80 %
Metal structure	50...100 %

Harmony Hub Clearances



- (1) PLC or other devices
- (2) Power supply or other devices

## Harmony Hub Wiring Diagram



(1) Wire sizes for Power Supply terminals (L+, N/-)